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REVIEWS

Flora of Illinois. By GEORGE NEVILLE JONES. 3rd ed. American Midland Naturalist Monograph 7. vi + 401 pp. Notre Dame, Indiana. 1963. \$7.50.

Jones' *Flora of Illinois* will be familiar to most Midwestern botanists, as it has been for a number of years one of the only up-to-date identification manuals of a Midwestern state. Since Deam's *Flora of Indiana* has been out of print for some years (apparently not to be reprinted in the near future) and the floras of Wisconsin and Michigan are still in preparation, there ought to be considerable local demand for the *Flora of Illinois*.

The general format of the book follows that of the second edition (1950), with one major exception. The usual sequence of families, based on the system of Engler and Prantl, has been abandoned in favor of a modification of that of Hutchinson; a conspectus of this new classification is presented toward the back of the book (pp. 369-373). By and large, Jones appears to have followed the arrangement in such Hutchinsonian works as Clapham, Tutin, and Warburg's *Flora of the British Isles*, but he has introduced some innovations of his own. Unfortunately, some of these modifications are highly questionable, at least if any significance at all is to be placed on the linear arrangement of families. Some of the more debatable assignments in the conspectus include: 1. The Violaceae and Cistaceae are placed in the Papaverales, apparently because of their parietal placentation. As far as I can determine, this is the first time that anyone has ever circumscribed the Papaverales in such a manner. 2. The inclusion of the Lauraceae in the same order with the Lythraceae, 60 families away from the Ranales, is baffling. This assignment is not likely to encourage Hutchinson to claim Jones as a disciple! 3. The Callitrichaceae are placed in the Myrtales between the Haloragaceae and Hippuridaceae. These three families do grow in wet places and tend to have reduced flowers, but there is no good evidence that the Callitrichaceae are any closer to the Hippuridaceae than they are to the Euphorbiaceae (where they were misplaced in the Engler system). 4. The Cactaceae are placed between the Passiflorales and Loasales, despite the fact that much biochemical and anatomical evidence demonstrates their affinity to the Centrospermae (Chenopodiales of Jones). 5. The Aristolochiales are placed after the Myrtales rather than the Ranales. 6. Jones unaccountably rejects one of Hutchin-

son's better innovations and separates *Yucca* and *Agave* into different orders; this disregards cytological and anatomical evidence that they are fairly closely related.

Also debatable, but admittedly a matter of opinion, is the consistency of treatment in delimitation of groups. If a "foolish consistency is the hobgoblin of little minds," still one expects a reasonable uniformity of circumscription. Thus Jones on the one hand accepts the dissolution of the Nymphaeaceae into three families (as Li has unconvincingly proposed) and maintains Menyanthaceae distinct from Gentianaceae, but on the other hand includes the Monotropaceae and Pirolaceae within the Ericaceae. The Saxifragaceae are split up à la Hutchinson into a number of families, but the Taxaceae are included in the same order with the Pinaceae. In general, Jones has tended to split supraspecific taxa rather finely; but here he at least has a lot of distinguished company.

The author implies in the introduction that the taxonomic treatments have been brought up to date by consulting the latest monographs and revisions. It is surprising, therefore, to find no reference to Haucke's important work on *Equisetum* subg. *Hippochaete*. The authorities cited for the two species of *Poinsettia* are incorrect. The bitterweed is listed as *Helenium tenuifolium* Nutt., although the correct name was shown in 1957 to be *H. amarum* (Raf.) Rock. However, it does appear that on the whole the nomenclature of the book is reliable.

Least it appear that I am being too captious, it ought to be pointed out that the objections listed above do not seriously detract from the utility of the book. The author (p. 2) specifically states that "the main objective of this work is . . . to afford a ready means of identification of the approximately 2400 species of flowering plants and ferns growing without cultivation in Illinois." It is only fair, therefore, to judge the book primarily by this standard. The physical lay-out of the volume is attractive, and the contents are logically arranged. The difficulty to the user may come as a consequence of the telegraphic style. As in previous editions, there are no separate descriptions of the taxa; the information is all presented in synoptic form in the leads of the keys. This works rather well when a species is being keyed down within a genus, since each species usually has a reasonably detailed diagnosis in the key. However, the characteristics of genera and families often have to be reconstructed from successive lines in a key, and this may give trouble to those (i.e., most of us!) who have short memories. For a common plant such as *Cichorium intybus*, for example, there is no description on the page where it is listed; and even in the key there is no indication of the characteristics of leaves (except that they are probably alternate), general habit, or involucre. In practice, such brevity will not seriously inconvenience the professional taxonomist or experienced amateur, who will in fact find identifications expedited by the uncluttered format. However, many beginning students in plant taxonomy may run into serious problems and need some supplementary reference with full descriptions. Perhaps part of the difficulty is that the book is mistitled; it should not be called *Flora of Illinois* but perhaps rather "Keys for Identification of the Flora of Illinois."

Judged as a manual of keys for ready identification, Jones' "flora" stands up well indeed. Perhaps, having seen that a little modernity can be a dangerous thing, he will in the next edition abandon the capriciously restyled sequence of families in the present book and either return to the hackneyed but convenient Engler and Prantl system or else take the trouble to carefully modify some new system to the needs of the Illinoian flora.—GRADY L. WEBSTER, Purdue University, Lafayette, Indiana.

Flora of Our Sierran National Parks. By SAMUEL J. PUSATERI. 170 pp., 177 line drawings, 26 black & white photos, 11 plates (66 color photos). Carl & Irving Printers, Tulare, California, 1963. Available from the author at Red Bud Acres, Three Rivers, California. \$3.75, paper-back; \$4.75 cloth.

The aim of Pusateri in presenting this book on the plants of a portion of the Sierra Nevada of California is "to bridge the gap which exists between the many